

### **New Claims**

Claims 22-25 have been added in the present amendment. New dependent claims 22 and 23 correspond to canceled claims 6 and 12. New independent claims 24 and 25 comprise elements found in canceled claims 1, 7, and pending claims 13 and 18. Furthermore, the limitations of claims 22-25 are supported by the specification on pages 8-9, and by Figure 1 of the drawings. Therefore, claims 22-25 do not add new matter to the Application.

### **Improper Final Rejection**

#### **New Grounds of Rejection**

The Examiner has indicated that the present Office Action is Final (page 9). However, on page 6 of the Action, the Examiner states that "Applicant's arguments with respect to claims 13-21 . . . are moot in view of the **new ground(s) of rejection.**" M.P.E.P. § 706.07(a) states:

second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement . . . .

The Examiner has introduced the newly cited Kaschke reference in the present Office Action. This new grounds of rejection was neither necessitated by applicant's amendment nor based upon information submitted in an information disclosure statement. A second action on the merits should not be made final if it includes a rejection of any claim amended to include limitations which reasonably should have been expected to be claimed. M.P.E.P. § 706.07(a).

The amendments to claims 13-21 should have been expected by the Examiner because the amendments (1) were suggested in the Office Action dated October 10, 1997, (2) incorporated limitations set forth in the preamble, such as a monolithic circuit or (3) corresponded to limitations found in other claims, such as the monolithic circuit limitation of claim 7. M.P.E.P. § 904 provides that the first prior art search "should cover the invention as **described and claimed**, including the inventive concepts toward which the claims appear to be directed."

The invention as originally described and claimed was directed to a fully monolithic video receiver channel, as described in the title, specification, drawings and claims of the present invention. Therefore, prior art related to monolithic video processing circuits and to RF processing circuits constructed on a single integrated substrate should have been included in the original search. Also, amendments incorporating these limitations into other claims were reasonably to be expected. Therefore, Applicant respectfully submits that the final rejection is premature in view of the new grounds of rejection and requests that the Examiner reconsider and withdraw the final rejection under M.P.E.P. § 706.07(d).

Response to Applicant's Traverse Not Complete

In the Office Action dated October 9, 1997, the Examiner stated

using a low-pass filter instead of a band-pass filter is a design preference as it is well established that the low-pass filter generally possess all of the same characteristics of band-pass filter.

(Office Action, page 5). In response, Applicant traversed the rejection and requested

in accordance with M.P.E.P. § 2144.03, that the Examiner provide a prior art reference which supports the proposition that a low-pass filter is equivalent to a band-pass filter. If, instead, the rejection is based upon facts within the personal knowledge of the Examiner, then Applicant requests that the Examiner provide an affidavit in accordance with 37 C.F.R. § 1.104(d)(2).

... and [requested] that the Examiner provide a reference or affidavit to support the proposition that switching low-pass and band-pass filters merely based upon cost considerations is well known or even possible.

(Amendment submitted December 5, 1997, pages 6-7).

M.P.E.P. § 707.07(f) requires that the Office Action should answer the substance of Applicant's traverse of any rejection. In the present Office Action, in response to Applicant's requests under M.P.E.P. § 2144.03 and 37 C.F.R. § 1.104(d)(2), the Examiner provided dictionary definitions of "low-pass filter" and

"band-pass" filter and quoted a **portion** of each definition. However, a comparison of the **full** definitions clearly shows that low-pass and band-pass filters **are not equivalent** according to the cited technical dictionary.

**band-pass filter** . . . . A wave filter that has a single transmission band, *neither of the cut-off frequencies being zero or infinite.*

THE NEW IEEE STANDARD DICTIONARY OF ELECTRICAL AND ELECTRONICS  
TERMS 90 (5th ed. 1993)(emphasis added);

**filter, low-pass.** A filter having a single transmission band *extending from zero to some cutoff frequency, not infinite.*

*Id.* at 500 (emphasis added).

Applicant submits that a partial citation of dictionary definitions in the final Office Action was not a clear and complete response to Applicant's arguments as required under M.P.E.P. § 707.07. First, the Examiner has only cited the portion of the definitions which support the proposition that low-pass filters are equivalent to band-pass filters, while ignoring the contradictory portions of the definitions. Second, the Examiner has not provided a prior art reference or affidavit that teaches exchanging low-pass and band-pass filters based merely upon **cost** without regard to any **technical** considerations. Accordingly, Applicant respectfully requests that the Examiner withdraw the final rejection of the pending claims and reconsider the application in view of the remarks herein.

#### **Rejections under 35 U.S.C. § 103(a)**

##### **Yamamoto/Kaschke Combination**

Claims 13-21 stand rejected as unpatentable over Yamamoto in view of Kaschke. The Office Action admits that Yamamoto does not teach constructing mixers, filters and amplifiers on an integrated substrate. Newly cited reference Kaschke is used to show that "putting the electrical components on a single integrated substrate circuit is very well-known in the art." (Office Action, page 4.). Applicant traverses the obviousness rejection of claims 13-21. The

Yamamoto and Kaschke references, either individually or in combination, do not teach or suggest every element of rejected claims 13-21 or new claims 22-25.

Kaschke **does not** teach putting electrical components, such as mixers, filters and amplifiers, on the same integrated substrate. Instead, the only type of electrical component discussed in the Kaschke disclosure is an LED that is used for a cellular telephone display. There is no discussion of RF or IF signal processing components, such as those elements required in the claims, at all in the Kaschke reference. LEDs for a display are not equivalent to the mixers, filters, and amplifiers required in claims 13-25.

Moreover, the Kaschke LEDs are **surface mount** components that are mounted on a **printed circuit** substrate (column 3, lines 30-32). Kaschke does not teach components that are **constructed on an integrated circuit substrate** as required in claims 13-25. Kaschke's teachings that LEDs can be mounted on printed circuits cannot be extended to suggest constructing monolithic RF and IF components, such as mixers, filters and amplifiers, because the Kaschke disclosure does not address the problems discussed in the Application, such as the lack of inductors in integrated circuits and the signal-to-noise considerations for integrated RF circuits. Furthermore, neither Yamamoto nor Kaschke suggest any way to overcome these problems. Therefore, the proposed combination does not provide any motivation to combine the references under M.P.E.P. § 2143.01, or teach or suggest the required claim limitations under M.P.E.P. § 2143.03.

Claims 14, 19, 24 and 25 additionally require a low-pass filter. The Office Action admits that Yamamoto does not teach a low-pass filter and suggests that low-pass and band-pass filters are interchangeable solely based upon cost. Applicant refers to the remarks set-forth above regarding low-pass and band-pass filters and again requests a prior art citation, or an affidavit, that teaches exchanging low-pass and band-pass filters merely based upon cost. There is no motivation to make such a modification of the Yamamoto system and there is no technical basis for such a change. Therefore, simply replacing a band-pass filter with a low-pass filter has no reasonable expectation of success under M.P.E.P. § 2143.02.

New claims 22-25 comprise, among other elements, the limitation that the first amplifier, first amplifying step, or variable gain amplifier, amplifies the IF signal to a maximum level acceptable as an input to the second filter to avoid distortion of the signal. This limitation corresponds to canceled claims 6 and 12, which were rejected in the Office Action dated October 10, 1997 as disclosed in the Yamamoto disclosure at column 4, lines 1-20. However, the cited portion of Yamamoto merely discloses the cited amplifier to be a "level control means" (column 4, lines 13-14). There is no teaching or suggestion in Yamamoto that amplifier 16 is used to amplify the signal to a maximum level acceptable to filter 17 to avoid distortion. Instead, amplifier 16 is part of a typical AGC circuit and is controlled by level detector 1 and error amplifier 4 to maintain a level signal at the output of filter 17, not at the input of filter 17 as required in claims 22-25.

#### Yamamoto/Umezawa Combination

Claims 24 and 25 comprise, among other elements, a "video signal" limitation. In the current Office Action, the Umezawa reference was combined with Yamamoto to show a "video signal" in the rejection of canceled claims 1-12. Applicant again traverses the combination of Yamamoto and Umezawa, and the use of Umezawa to teach video signal processing. Umezawa in no way teaches video signal processing, such as mixing, filtering or amplifying, as required in claims 24 and 25. Umezawa merely discloses several variations of a design for a mobile video telephone, wherein the only portion corresponding to a circuit is a box labeled "main circuit board 17." There is no teaching or suggestion that main circuit board 17 can be combined with Yamamoto. Furthermore, even if Yamamoto and Umezawa were combined, there is no teaching or suggestion that the voice channel gain control circuit of Yamamoto could be used to process video signals.

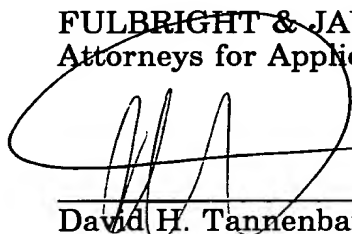
There is no suggestion to combine the Yamamoto and Umezawa references, there is no reasonable expectation that the combination would provide video signal processing, and the proposed combination does not teach every limitation of claims 24 and 25. Therefore, the Yamamoto/Umezawa combination does not satisfy the *prima facie* case of obviousness as set forth in M.P.E.P. § 2143.

Accordingly, claims 24 and 25 are not obvious under 35 U.S.C. § 103(a) in view of the Yamamoto and Umezawa references.

Applicant respectfully requests that the Examiner call the below listed attorney if the Examiner believes that a discussion would be helpful in resolving any remaining problems.

Respectfully submitted,

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